There has never been more need to discuss cybersecurity related issues. We live in a world where criminals do not have to physically visit a bank to steal money from it, where elections results can be influenced by data breached from personal email accounts, where to win a war a country needs skilled cybersecurity specialists rather than powerful weapons and where patients do not get recommended treatment because a hospital is under a cyberattack. The financial industry as a backbone of any modern economy requires adequate protection against cybercrime. We discuss major cyber threats for financial institutions as well as possible protection methods. After that we introduce Basel II Framework for operational risk assessment and we evaluate data breach risk in an empirical analysis.